

Application No. 09/677,742

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) An imaging apparatus, comprising:
a first substrate;
a second substrate;
a first imaging device mounted on the first substrate; wherein the first imaging device includes a plurality of first imaging structures;
a second imaging device mounted on the second substrate; wherein the second imaging device includes a plurality of second imaging structures; and
a glass tie bar having a first portion of the glass tie bar attached to the first substrate, and having a second portion of the glass tie bar attached to the second substrate.
2. (Currently amended) The imaging apparatus of **claim 1**, wherein the first and second portions of the glass tie bar are attached to the first and second substrates by an adhesive cured by a mechanism other than heat.
3. (Currently amended) The imaging apparatus of **claim 1**, wherein the first and second portions of the glass tie bar are attached to the first and second substrates by a light-curable adhesive.

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4. (Original) The imaging apparatus of **claim 3**, wherein the light-curable adhesive is an ultraviolet light curable adhesive.

5. (Currently amended) The imaging apparatus of **claim 1**, wherein the glass tie bar ~~is formed of a glass having~~ has a coefficient of thermal expansion substantially similar to the coefficient of thermal expansion of the first and second imaging devices.

6. (Currently amended) The imaging apparatus of **claim 5**, wherein the first and second portions of the glass tie bar are attached to the first and second substrates by a light-curable adhesive.

7. (Currently amended) The imaging apparatus of **claim 6**, wherein:

the first and second imaging devices comprise semiconductor imaging chips; and

the glass tie bar ~~is formed of a glass having~~ has a coefficient of thermal expansion of approximately 3.25 parts per million per degree Celsius.

8. (Original) The imaging apparatus of **claim 5**, wherein:
the first imaging device extends beyond one edge of the first substrate; and

the second imaging device extends beyond one edge of the second substrate;

the first and second substrates are arranged so that the first and second imaging devices are proximate one another.

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9. (Currently amended) An imaging apparatus, comprising:

a first imaging subarray comprising a first printed wiring board having a joining end and a plurality of first semiconductor imaging chips mounted on the first printed wiring board, including a first end chip, wherein a portion of the first end chip projects beyond the joining end of the first printed wiring board;

a second imaging subarray comprising a second printed wiring board having a joining end, and a plurality of second semiconductor imaging chips mounted on the second printed wiring board, including a second end chip, wherein a portion of the second end chip projects beyond the joining end of the second printed wiring board; and

a glass tie bar connecting the first and second imaging subarrays, wherein:

a first portion of the glass tie bar is attached to the first printed wiring board with a light-curable adhesive; and

a second portion of the glass tie bar is attached to the second printed wiring board with a light-curable adhesive.

10. (Original) The imaging apparatus of **claim 9**, wherein the first and second imaging subarrays are positioned so that the end chip of the first imaging subarray is adjacent the end chip of the second imaging subarray.

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11. (Currently amended) The imaging apparatus of **claim 10**, additionally comprising a second glass tie bar connecting the first and second imaging subarrays, wherein:

a first portion of the second glass tie bar is attached to the first printed wiring board with a light-curable adhesive; and

a second portion of the second glass tie bar is attached to the second printed wiring board with a light-curable adhesive.

12. (Original) The imaging apparatus of **claim 11**, wherein:
the first imaging chips are linearly aligned with one another on the first printed wiring board;

the second imaging chips are linearly aligned with one another on the second printed wiring board; and

the first and second imaging subarrays are positioned so that the first and second imaging chips are linearly aligned with one another.

13. (Original) The imaging apparatus of **claim 12** wherein:
the end chip of the first semiconductor imaging chip projects approximately 0.015 inch beyond the joining end of the first printed wiring board; and

the second semiconductor imaging chip projects approximately 0.015 inch beyond the joining end of the second printed wiring board.

14. (Currently amended) The imaging apparatus of **claim 13** wherein the glass tie bar ~~bars have a~~ is formed of glass having coefficient of thermal expansion substantially similar to the coefficient of thermal expansion of the first and second chips.

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15. (Currently amended) The imaging apparatus of **claim 13** wherein the glass tie bars have ~~has a~~ coefficient of thermal expansion of approximately 3.25 parts per million per degree Celsius.

16. (Currently amended) The imaging apparatus of **claim 11** wherein the glass tie ~~bar is~~ bars are substantially transparent to the light appropriate for curing the light-curable adhesive.

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17. (Original) A method of forming an imaging apparatus, the method comprising:

forming a first imaging subarray comprising a first printed wiring board having a joining end and a plurality of first semiconductor imaging chips mounted on the first printed wiring board, including a first end chip, wherein a portion of the first end chip projects beyond the joining end of the first printed wiring board;

forming a second imaging subarray comprising a second printed wiring board having a joining end and a plurality of second semiconductor imaging chips mounted on the second printed wiring board, including a second end chip, wherein a portion of the second end chip projects beyond the joining end of the second printed wiring board;

bringing the first imaging subarray into proximity with the second imaging subarray so that the first end chip is immediately adjacent the second end chip;

applying light-curable adhesive to the first printed wiring board and to the second printed wiring board;

placing a glass tie bar so that a first portion of the tie bar contacts the light-curable adhesive on the first printed wiring board, and a second portion of the tie bar contacts the light-curable adhesive on the second printed wiring board; and

directing light onto the light-curable adhesive to cure the light-curable adhesive.

18. (Original) The method of **claim 17**, wherein the step of directing light onto the light-curable adhesive comprises directing light through the glass tie bar to the light-curable adhesive.

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19. (Original) The method of **claim 17**, wherein the step of directing light onto the light-curable adhesive comprises directing ultraviolet light onto the light-curable adhesive.

20. (New) The imaging apparatus of **claim 8** wherein the first and second substrates are arranged so that the first and second imaging devices abut one another.